REMARKS

Claims 1-124 are pending in the application.

Claims 1-124 have been rejected.

Rejection of Claims under 35 U.S.C. §103

Claims 1-10, 15-41, 46-72, 77-103, and 108-124 stand rejected under 35 U.S.C. §103(a), as being unpatentable over Cohen et al, U.S. Patent No. 6,389,462 (hereinafter referred to as "Cohen") in view of Smith et al, U.S. Patent No. 6,308,634 (hereinafter referred to as "Smith").

Claim 1 recites:

A method of managing network communication comprising:

terminating a first transmission control protocol ("TCP") connection at a first network element, wherein said first TCP connection is between said first network element and a second network element, and said first TCP connection is intended to be terminated at a third network element;

initiating a second TCP connection between said first network element and a third network element;

establishing communications between said second and said third network elements via said first network element;

determining need for data transfer between said second and said third network elements by monitoring an amount of space available in at least one of a plurality of data buffers; and

transferring said data between said second and said third network elements (emphasis added).

The Examiner relies upon Cohen to teach the operations of "terminating," "initiating," "establishing," and "transferring." Office Action, pages 2-3. In the rejection, the Examiner equates Cohen's proxy with the first network element, Cohen's client with the second network element, and Cohen's origin server with the third network element.

The Examiner notes that Cohen fails to determine the need for data transfer between the second and third network elements in the manner recited in claim 1. In particular, Cohen fails to determine the need for data transfer "by monitoring an amount of space available in at least one of a plurality of data buffers." The Examiner relies upon col. 13, lines 29-57 of Smith to teach this feature of the claim.

The cited portion of Smith recites:

> FIG. 16 is a flow chart summarizing a method 1600 for writing data to an allocated input or output buffer. Method 1600 will be described with reference to writing data to an allocated input buffer, but is equally well suited to writing server data to an output buffer. In a first step 1602, a client process (e.g., client process 204(1)) uses input buffer identifier 1204(1) to retrieve the buffer status information (the start address 1304 and the length of valid data 1306) for the allocated buffer 1212. Then, in a second step 1604, client process 204(1) transfers a first block of the available client data into the allocated buffer 1212. Client process 204(1) calculates the storage address for the block of data by adding the length of valid data 1306 (data written value) to the start address 1302 of the buffer. Then, in a third step 1606, client process 204(1) updates the buffer status information by incrementing the length of valid data 1306 (data written value) by the size of the data block written to the allocated buffer 1212. Next, in a fourth step 1608, client process 204(1) determines whether the transferred block of data included an end-of-data indicator, and if so then method 1600 ends.
>
> If, in fourth step 1608, client process 204(1) determines that the transferred data block did not include an end-of-file indicator, then in a fifth step 1610 client process 204(1) determines whether the allocated buffer is full by comparing the updated length of valid data 1306 to the known size of buffer 1212. If the data buffer 1212 is not full, then method 1600 returns to second step 1604 to transfer the next block of data. Smith, col. 13, lines 29-57.

The above-quoted section of Smith teaches how data can be written into a buffer. The first steps, which write a block of data to the buffer, are described as being performed unconditionally. Then, two determinations are made: the client process determines whether the transferred data block includes an end-of-data / end-of-file indicator at 1608, and the client process determines whether the buffer is full at 1610.

The only determination in the cited portion of Smith that can arguably be said to determine any <u>need</u> to transfer data is the determination that is made based upon the presence or lack of an end-of-data indication in the just-written data block. In contrast, the determination based upon the fullness of the buffer is made to determine whether data

can be transferred into the buffer. The fullness of the buffer is in no way used to determine the need to transfer data; instead, this factor only controls whether data can be transferred into the buffer. This is highlighted by the fact that the buffer fullness determination (1610) is only made if no end-of-data indicator is found (1608). *See* Smith, Fig. 16 (showing that the buffer fullness determination is only made in situations in which a need to transfer additional data has already been identified based upon the lack of the end-of-data indicator). Thus, for at least this reason, the cited portion of Smith clearly fails to teach or suggest "determining need for data transfer between said second and said third network elements by monitoring an amount of space available in at least one of a plurality of data buffers."

Furthermore, Applicant notes that the cited portions of Smith simply teach writing data, which appears to already be available locally, to a buffer. Detecting the presence or absence of the end-of-data indication is only used to determine whether there is more data to write to the buffer, not to determine "need for data transfer between said second and said third network elements," as recited in claim 1. Accordingly, the cited portion of Smith also clearly fails to teach or suggest this feature of the claim.

Even if Smith and Cohen are combined in the manner suggested by the Examiner, the resulting combination still fails to teach or suggest the features of claim 1. In particular, the combination of Smith and Cohen would result in a system in which Cohen's proxy or origin server implements the buffer-writing technique described in the cited portion of Smith. Accordingly, such a system would determine the need to write additional server data, which is already available at the origin server or proxy, into a buffer based upon whether a previously-written unit of data contained an end-of-data indicator. This system would clearly not determine the need to transfer data between the origin server and a client, nor would this system make such a determination based upon an amount of space available in a buffer.

For at least the foregoing reasons, the cited art fails to teach or suggest "determining need for data transfer between said second and said third network elements by monitoring an amount of space available in at least one of a plurality of data buffers." Claim 1 and dependent claims 2-10 and 15-31 are patentable over the cited art for at least the foregoing reasons. Claims 32-41, 46-72, 77-103, and 108-124 are patentable over the cited art for similar reasons.

Claims 11, 13, 42, 44, 73, 75, 104, and 106 stand rejected under 35 U.S.C. §103(a), as being unpatentable over Cohen in view of Smith and in further view of Riddle, U.S. Patent No. 5,920,732 (Riddle). Claims 12, 14, 43, 45, 74, 76, 105, and 107 stand rejected under 35 U.S.C. §103(a), as being unpatentable over Cohen, in view of Smith and in further view of Radko, U.S. Patent No. 5,687,392 (Radko). These claims are patentable over the cited art for reasons similar to those presented above with respect to claim 1.

CONCLUSION

In view of the amendments and remarks set forth herein, the application and the claims therein are believed to be in condition for allowance without any further examination and a notice to that effect is solicited. Nonetheless, should any issues remain that might be subject to resolution through a telephonic interview, the Examiner is invited to telephone the undersigned at 512-439-5087.

I hereby certify that this correspondence is being deposited with the United States Postal Service as First Class Mail in an envelope addressed to: Mail Stop AF, COMMISSIONER FOR PATENTS, P. O. Box 1450, Alexandria, VA 22313-1450, on January 13, 2007.

Brenna A. Brock 1-13-2007

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